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(FILE 'HOME' ENTERED AT 11:22:05 ON 04 DEC 2002)

FILE 'REGISTRY' ENTERED AT 11:22:14 ON 04 DEC 2002
L1 1 S 9076-63-5/RN

FILE 'HCAPLUS' ENTERED AT 11:22:29 ON 04 DEC 2002

FILE 'REGISTRY' ENTERED AT 11:22:32 ON 04 DEC 2002
SET SMARTSELECT ON

L2 SEL L1 1- CHEM : 4 TERMS
SET SMARTSELECT OFF

FILE 'HCAPLUS' ENTERED AT 11:22:33 ON 04 DEC 2002

L3 5 S L2
E FLAVOBACTERIUM/CT

L4 1 S L3 (L) (FLAVOBACTERIUM LUTESCENS OR FLAVOBACTER?)

=>

L5 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2002 ACS
RN 9076-63-5 REGISTRY
CN Dehydrogenase, L-pipecolate (9CI) (CA INDEX NAME)
OTHER NAMES:
CN E.C. 1.5.99.3
CN L-Pipecolate dehydrogenase
CN Piperidine-6-carboxylate dehydrogenase
MF Unspecified
CI MAN
LC STN Files: BIOSIS, CA, CAPLUS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
5 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

=> d ibib ab 1

L4 ANSWER 1 OF 1 HCPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:117169 HCPLUS

DOCUMENT NUMBER: 132:162810

TITLE: Cloning of genes for L-lysine-2-oxoglutarate

6-aminotransferase and **piperidine-6**

-carboxylate dehydrogenase from

Flavobacterium lutescens and use of

the genes for production of L-homoglutamic acid

Fujii, Tadashi; Narita, Takao; Nakata, Kuniho;

Agematu, Hitosi; Tsunekawa, Hiroshi; Isshiki, Kunio;

Yoshioka, Takeo

INVENTOR(S):

Mercian Corp., Japan

SOURCE:

PCT Int. Appl., 62 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008170	A1	20000217	WO 1999-JP4197	19990804
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2337981	AA	20000217	CA 1999-2337981	19990804
AU 9950642	A1	20000228	AU 1999-50642	19990804
EP 1103612	A1	20010530	EP 1999-935047	19990804
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.:

JP 1998-232382 A 19980805

JP 1999-182362 A 19990628

WO 1999-J9 990419W 19990804

WO 1999-JP4197 W 19990804

AB The genes encoding L-lysine-2-oxoglutarate 6-aminotransferase (LAT) and piperidine-6-carboxylate (P6C) dehydrogenase are isolated from *Flavobacterium lutescens* strain IFO 3084 and used for the transformation of *F. lutescens* to increase the yield of L-homoglutamic acid. LAT and P6C dehydrogenase are comprised of 491 and 510 amino acids, resp. Transformation of *F. lutescens* with the gene for LAT or P6C dehydrogenase increased the yield of L-homoglutamic acid by 1.5-2 folds.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 13 ibib ab 1-5

L3 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:117169 HCAPLUS
DOCUMENT NUMBER: 132:162810
TITLE: Cloning of genes for L-lysine-2-oxoglutarate
6-aminotransferase and piperidine-6
-carboxylate dehydrogenase from
Flavobacterium lutescens and use of the genes for
production of L-homoglutamic acid
INVENTOR(S): Fujii, Tadashi; Narita, Takao; Nakata, Kuniho;
Agematu, Hitosi; Tsunekawa, Hiroshi; Isshiki, Kunio;
Yoshioka, Takeo
PATENT ASSIGNEE(S): Mercian Corp., Japan
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

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WO 2000008170	A1	20000217	WO 1999-JP4197	19990804
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2337981	AA	20000217	CA 1999-2337981	19990804
AU 9950642	A1	20000228	AU 1999-50642	19990804
EP 1103612	A1	20010530	EP 1999-935047	19990804
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: JP 1998-232382 A 19980805
JP 1999-182362 A 19990628
WO 1999-J9 990419W 19990804
WO 1999-JP4197 W 19990804

AB The genes encoding L-lysine-2-oxoglutarate 6-aminotransferase (LAT) and
piperidine-6-carboxylate (P6C) dehydrogenase are isolated from
Flavobacterium lutescens strain IFO 3084 and used for the transformation
of *F. lutescens* to increase the yield of L-homoglutamic acid. LAT and P6C
dehydrogenase are comprised of 491 and 510 amino acids, resp.
Transformation of *F. lutescens* with the gene for LAT or P6C dehydrogenase
increased the yield of L-homoglutamic acid by 1.5-2 folds.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1980:195215 HCAPLUS
DOCUMENT NUMBER: 92:195215
TITLE: Enzyme of pipecolate metabolism. Studies on the
question of regional piperidine synthesis in the mouse
brain
AUTHOR(S): Garweg, G.; Von Rehren, D.; Hintze, U.
CORPORATE SOURCE: Anat. Inst., Univ. Hamburg, Hamburg, Fed. Rep. Ger.
SOURCE: Verhandlungen der Anatomischen Gesellschaft (1979),
Volume Date 1978, 73(2), 1051-2
CODEN: VHAGAS; ISSN: 0066-1562
DOCUMENT TYPE: Journal
LANGUAGE: German
AB The distribution of .DELTA.1-pyrrolin-2-carboxylate reductase, L
-pipecolate dehydrogenase, and .DELTA.1-piperideine-6-
carboxylate dehydrogenase activities in various regions of mouse brain was
detd. A marked activity difference, with the max. conversion rate

occurring in the prosencephalon and a lack of activity in cerebellum and medulla spinalis, was obsd. only for pyrrolin-2-carboxylate reductase. The expression of region-specific biogenesis of pipecolic acid in mouse brain was in between that previously reported for dog and monkey. In contrast to them, the distribution of pipecolate dehydrogenase and piperideine-6-carboxylate dehydrogenase in mouse brain showed an extensive, equal distribution in all areas of the brain.

L3 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1972:55563 HCAPLUS
DOCUMENT NUMBER: 76:55563
TITLE: Pipecolic acid
AUTHOR(S): Rodwell, Victor W.
CORPORATE SOURCE: Dep. Biochem., Purdue Univ., Lafayette, Indiana, USA
SOURCE: Methods Enzymol. (1971), Volume 17, Issue Pt. B, 174-88. Editor(s): Colowick, S. P. Academic: New York, N. Y.
CODEN: 18HWA8

DOCUMENT TYPE: Conference
LANGUAGE: English

AB Improved methods are given for synthesis of DL-pipecolic acid (I), with 2 methods for the resolution of I into D- and L-forms. In a new procedure, L-pipecolic acid (II) is obtained from fresh green beans (*Phaseolus vulgaris*). Phys. and chem. properties of I and II are given. Spectra are given (300-650 m.mu.) for the adducts of various imino acids with ninhydrin. When paper chromatograms are sprayed with ninhydrin in EtOH or acetone, the initial color with I is purple, like amino acids. On standing (particularly if collidine is present) the color changes to yellow-brown. If Cd acetate is added to the ninhydrin reagent, alpha-amino acids give red colors. The I color remains royal purple, providing a spot test for I. The purification and assay of II-dehydrogenase from *Pseudomonas putida* P2 (ATCC 25.571) are described. Properties of the enzyme are described.

L3 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1967:513926 HCAPLUS
DOCUMENT NUMBER: 67:113926
TITLE: Metabolism of pipecolic acid in a *Pseudomonas* species.
V. Pipecolate oxidase and dehydrogenase
AUTHOR(S): Baginsky, Marietta L.; Rodwell, Victor W.
CORPORATE SOURCE: Sch. of Med., Univ. of California, San Francisco, CA, USA
SOURCE: J. Bacteriol. (1967), 94(4), 1034-9
CODEN: JOBAAY

DOCUMENT TYPE: Journal
LANGUAGE: English

AB cf. CA 65: 7493h. Oxidn. of pipecolate to .DELTA.1-piperideine-6-carboxylate is catalyzed by pipecolate oxidase, an inducible, membrane-bound dehydrogenase assocd. with the electron transport components of *P. putida* P2. From the oxidase a smaller particle contg. FAD and cytochrome b was obtained, but it was not able to catalyze electron transfer to O or to cytochrome c. Certain properties of the L-pipecolate dehydrogenase (I) an FAD-flavoprotein, are reported. Neither O nor mammalian cytochrome c served as electron acceptors for pipecolate oxidn. by I. The apparent Km for L-pipecolate was 1.7 .times. 10-2M. 17 references.

L3 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1967:112374 HCAPLUS
DOCUMENT NUMBER: 66:112374
TITLE: Studies on the electron transport particle of *Pseudomonas* P2 and purification of pipecolic acid dehydrogenase
AUTHOR(S): Baginsky, Marietta L.
CORPORATE SOURCE: Univ. of California, San Francisco, CA, USA
SOURCE: (1967) 170 pp. Avail.: 65-4894
From: Diss. Abstr. B 1967, 27(7), 2268
DOCUMENT TYPE: Dissertation
LANGUAGE: English

AB Unavailable